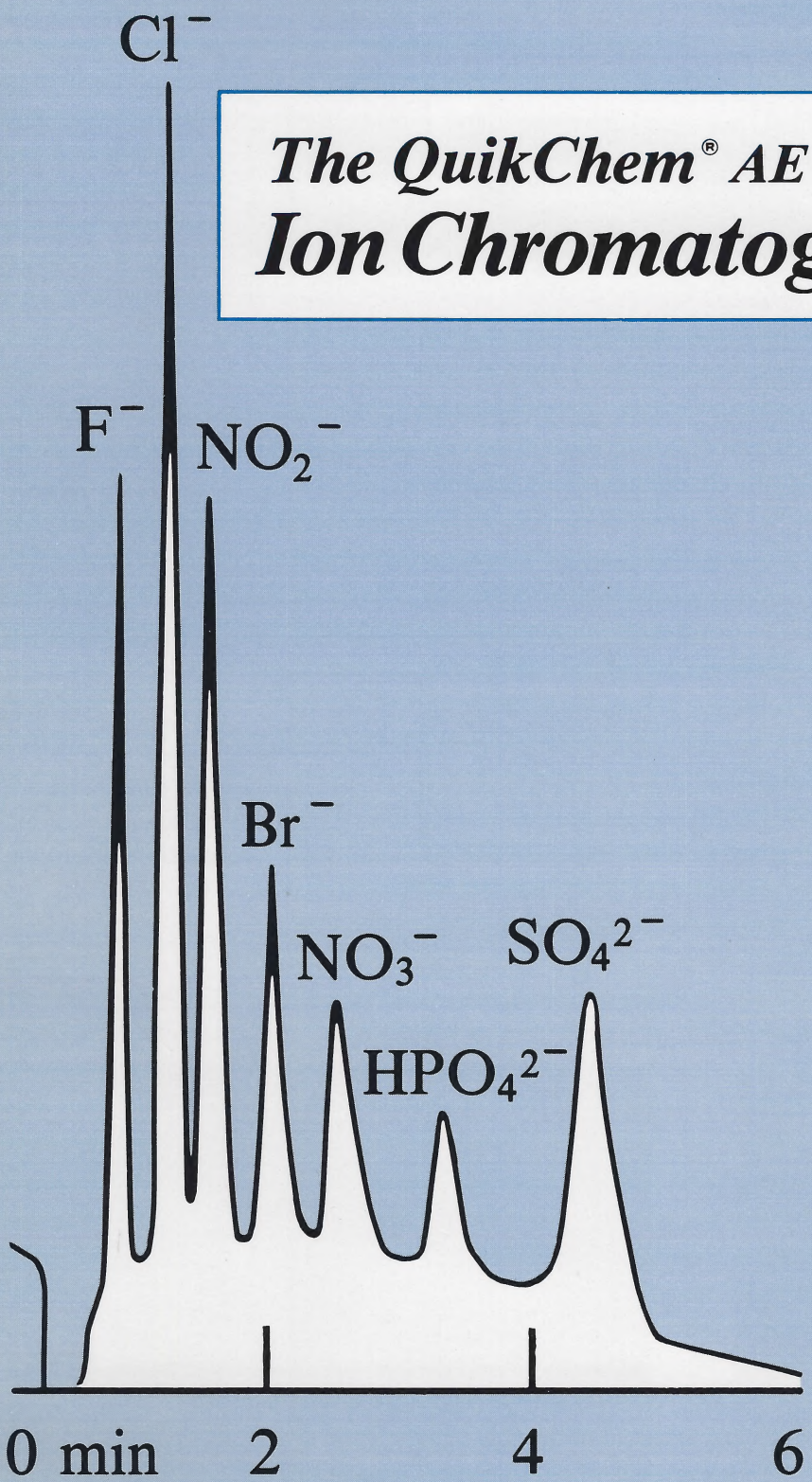

The QuikChem® AE
Ion Chromatography Option

LACHAT
INSTRUMENTS

The IC Option

The QuikChem Automated Ion Analyzer has always provided the maximum in productivity for the rapid, accurate and precise determinations of ionic species using flow injection analysis (FIA). With the introduction of the QuikChem AE (Advanced Edition), samples can also be profiled for their inorganic ions using ion chromatography (IC). That's right. Now, both FIA and IC can be performed on one instrument!

The QuikChem IC Option consists of a module which is very similar to the flow injection-based Sample Processing Module. This unit incorporates a high pressure injection valve with electronic actuation, a Profiling Module configured and guaranteed for your application and a photometric detector. The IC Option also includes a high pressure pump with selectable flow rates between 0.05 and 9.99 mL/min and upper and lower pressure limit settings between 0 and 6000 psi.

Applied IC

The QuikChem AE provides chromatography made for the applied laboratory. Not a research tool adapted for the production-oriented lab, but an IC designed from the ground up to make ion profiling fast, simple and routine.

Simple Changeover

Switching from FIA to IC is simple. All you do is connect the appropriate Profiling Module, turn on the high pressure pump and down-load your IC method to the System Unit. The standard software provided to support both FIA and IC is identical so there is no need to learn two software packages.

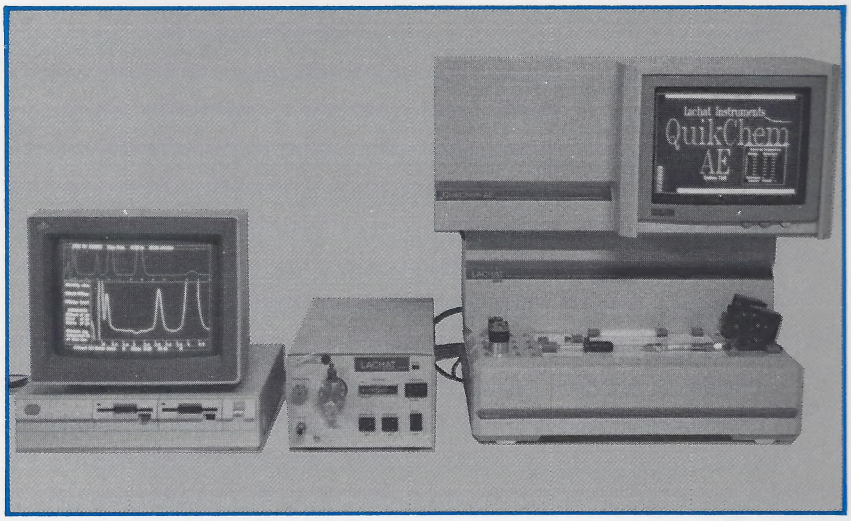

Figure 1: QuikChem AE shown with the IC Option

As part of the method definition, the operator specifies the analytes of interest. Then, instead of viewing a classical chromatogram during run-time, each analyte is assigned its own peak frame. You see only the information of interest, not a mass of peaks.

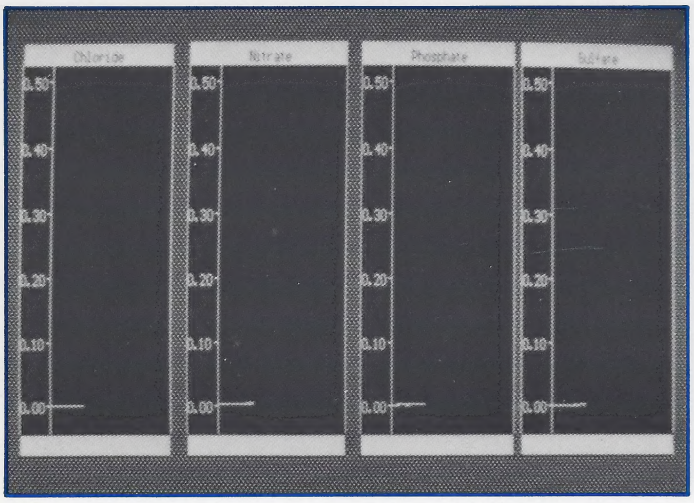

Figure 2(a): Run-time display of method defined for the determination of four analytes

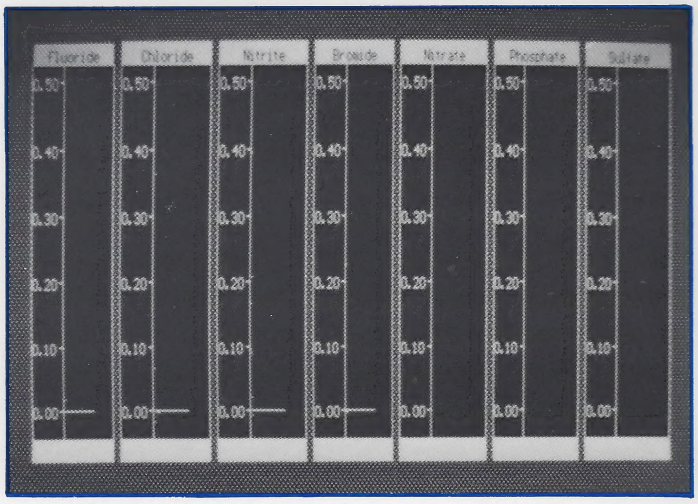

Figure 2(b): Run-time display of method defined for the determination of seven analytes

Profiling Flexibility

With QuikChem IC, **you** are in control. Select a Profiling Module complete with pre-filter, guard column and analytical column specifically configured and guaranteed for your application. Profile the basic anions, alkali metals, alkaline earths or transition metals simply by switching in the appropriate Profiling Module. You can also profile two ionic classes simultaneously with the purchase of a second IC Option.

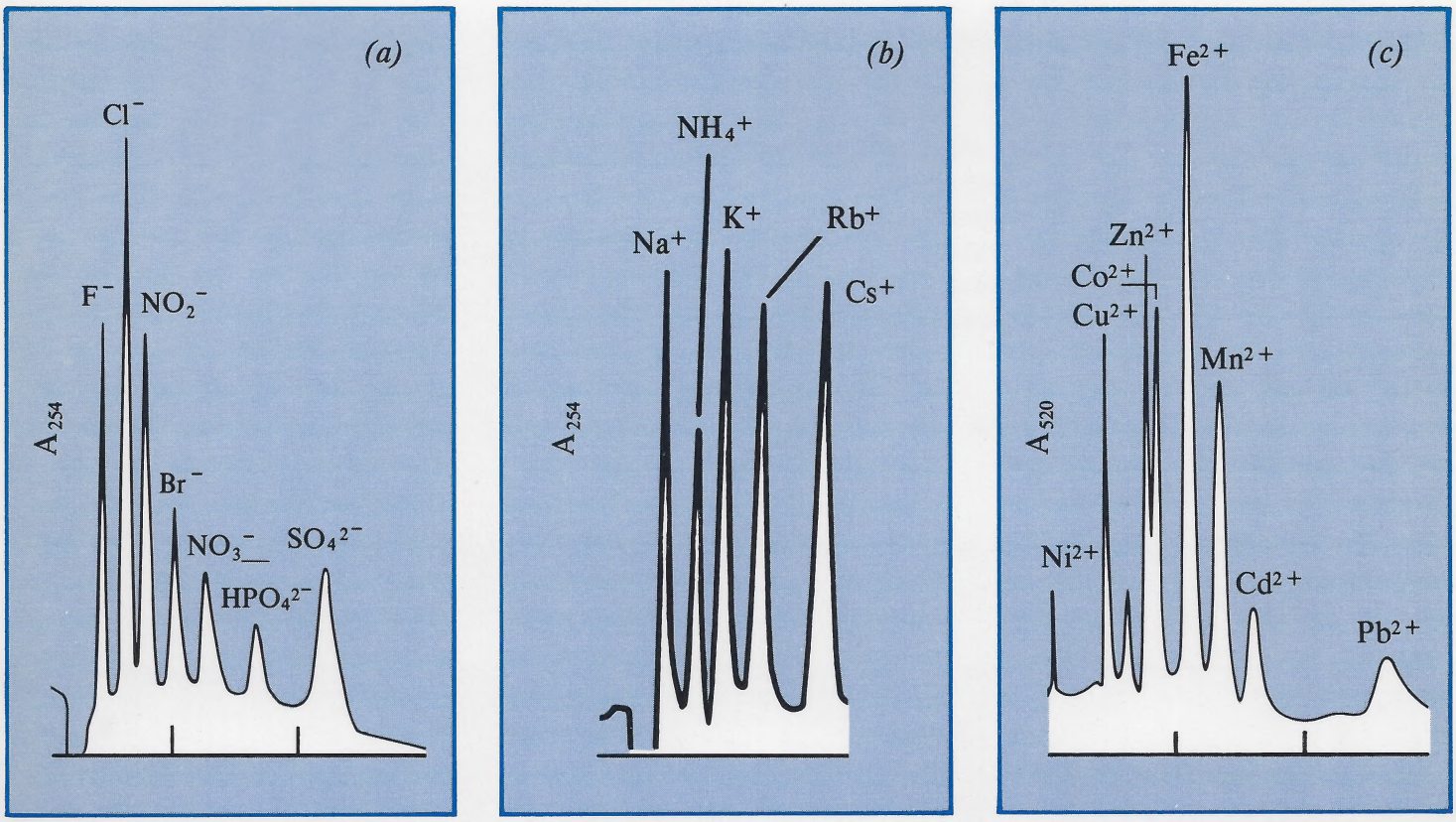

Figure 3: QuikChem AE ion profiling of (a) basic anions, (b) alkaline earths and (c) transition metals

Available Software for Chromatographers

The standard QuikChem AE software supplied with the IC Option provides all of the data reduction, report generation and file archiving features most operators will ever need. However, for those users desiring high performance post-run re-integration, the IC Expansion Software package may be purchased as an option. With this product you can print out a multi-point calibration curve, a complete chromatogram with peak labelling, instrument conditions and an integration report with peak number, area, height, type, width, area %, name and baseline. Plots are generated from digitized data points rather than from a screen dump which provides superior print quality.

Recalculations can be performed through an interactive graphics system that allows you to place the baseline wherever you need it and produce a new set of results using the adjusted baseline. You can also zoom in on any section of the chromatogram and select it for expanded viewing to see the fine details.

The quick edit function allows fast access to method parameters for real-time changes without following the normal path through screens. Any changes made in this way can then be amended to the method at the completion of a run.

Up to five chromatograms can be shown offset from each other on the screen or printout allowing you to easily examine them for subtle differences. You can even highlight selected peaks in different colors for easy identification.

All data is stored in binary format in order to use minimum disk storage space. All reports are in ASCII format so that they can be exported to other programs such as those for word processing and spreadsheet applications. A special utility is included to export files directly into a Lotus 1-2-3 spreadsheet format.

Instrument Specifications*

High Pressure Pump

Flow Rate:	Selectable between 0.05 and 9.99 mL/min
Pressure Range:	0 to 6000 psi
Pressure Limit Settings	
Lower:	0 to 6000 psi
Upper:	0 to 6000 psi
Pressure Readout:	Analog meter in psi and MPa

UV Detector

Source:	Low pressure, cold cathode mercury gaseous discharge lamp
Envelope:	Double bore quartz tubing
Lamp Life:	5000 hours minimum
Detector:	Silicon photodiode with quartz windows
Flow Cell:	Quartz construction with 0.2 mm path length

Injection Valve

Type:	Rheodyne 7010
Sample Volume:	5 to 5000 uL
Actuation:	Electronic

*In order to provide superior quality, we reserve the right to modify these specifications as required.

DEALERS

Australia
Analytical Instruments Pty. Ltd.
95 Lansborough Ave.
Scarborough, Queensland
Tel: 20 35 066
Fax: 88 10 019

Belgium
Techmation
8, Werkhuizenkaai
1210 Brussels
Tel: 02/241 65 73
Fax: 02/216 84 23

Brazil
VDC Instrumentos Cientificos Ltda.
Rua Jose Bonifacio
458 Todas os Santos
20771 Rio de Janeiro
Tel: (021) 593-8223
Fax: (021) 594-9770

Canada
Terochem Scientific
169 Idema Rd.
Markham, Ontario L3R 1A9
Tel: 416-940-1831
Fax: 416-940-1832

Denmark
Struers Chem
Valhojs Alle 176
2610 Rodovre
Tel: 31 70 80 90
Fax: 31 72 00 85

Federal Republic of Germany
Techmation MBH
Niederrheinstr. 106. 4000
Dusseldorf 30
Tel: (0211) 451052
Fax: (0211) 4543215

Finland
Etek Oy
P.O. Box 80
SF-00101 Helsinki
Tel: +358 0 729 2747
Fax: +358 0 729 2612

France
Techmation
20, Quai de la Marne
75019 Paris
Tel: (1) 42 00 11 05
Fax: (1) 42 40 37 80

Hong Kong
Eurotherm (Far East) Ltd.
21/F Kai Tak Commercial Bldg.
317-321 Des Voeux Road.
Central
Tel: 852 5 814 0311
Fax: 852 5 870 0479

India
Elron Instrument Co. Pvt. Ltd.
B-2, Saktar Building
79-80 Nehru Place
New Delhi 110019
Tel: 6439006
Fax: 6442728

Ireland
AGB Scientific
Dublin Industrial Estate
Glasnevin - Dublin 11
Tel: 01 309533
Fax: 01 300608

Italy
Idronaut Srl.
Via Monte Amiata
10-20047 Brugherio (MI)
Tel: (039) 879656-883832
Fax: (039) 883382

Netherlands
Anasys B.V.
P.O. Box 13
7665 ZG Albergen
Tel: 05490-64926
Fax: 05490-70319

Singapore
Lab Essentials Pte. Ltd.
203 Henderson Rd.
Block B. #08-08
Tel: 2782855
Fax: 2739381

South Korea
Doo Ree Tech Inc.
Room 400
Jangan Bldg.
464-1 Jangan-Dong
Dongdaemoon-Ku, Seoul
Tel: (02) 242-1877
Fax: (02) 242-1879

Taiwan
AST Corp.
Rm. 3 Fl. 7, No. 115. Sec. 1
Hangchow S. Rd.
Taipei
Tel: (02) 351-5133
Fax: (02) 397-2438

Thailand
Thai Unique Co. Ltd.
159-161 Tanao Rd.
Bangkok 2
Tel: 02 2 22 17 751

United Kingdom
Roth Scientific Co. Ltd.
Alpha House
Alexandra Rd.
Farnborough, Hants GU 6BU
Tel: (0252) 513131
Fax: (0252) 543609

LACHAT INSTRUMENTS
6645 West Mill Road
Milwaukee, WI 53218 USA
Phone: 414-358-4200
FAX: 414-358-4206